



How maintenance can create an energy efficient future



REFRIGERANTS AUSTRALIA EXECUTIVE director, Greg Picker explains why maintenance is critical to the future of HVACR.



Almost every national plan to fight climate change, or international assessment of action to reduce greenhouse gas emissions, includes words about the benefits of improving energy efficiency.

The basic idea clearly makes sense, right? The same benefits for a smaller energy spend and – presumably – reduced emissions from generating electricity.

And we've done a superb job in delivering it. In September, my family celebrated my eldest daughter's 21st birthday. Today's air conditioning is 60 per cent more efficient than when my daughter, Imogen, was born.

But here's the bad news. After a while the easy wins are all gone and further improvements are smaller, often much smaller, and far more expensive. I can't say we have reached that point yet, but it certainly is coming. Imogen's air conditioner will not be 60 per cent more efficient than today's units when she is 40 (unless we have

some tremendous technological breakthrough).

Yet there remains real hope that we can keep delivering more for less even without some new whiz-bang kit.

Today's assessment of energy efficiency is about new equipment at point of sale. That is how we have always made these assessments. An

open secret in our industry is much, if not most, equipment runs poorly because of poor installation, lack of maintenance and inconsistent repair efforts.

We discussed this point at ARBS (put in citation) and described the outcomes of two recent studies:

1. The first looked at assessments of thousands of service calls conducted by Grosvenor over the past five years and more. It proved what we all know to be true, a large percentage of installed equipment is running poorly. (citation)
2. The second bench tested refrigeration and air conditioning equipment found that these faults lead to significant energy penalties from a few per cent up to 70 per cent. (citation)

LEFT: A lack of maintenance and inconsistent repair efforts are widespread problems.

BELOW LEFT: Refrigerants Australia executive director, Greg Picker.

Why did we need to prove the obvious? Building owners, governments and facility managers have not consistently recognised the needs for and benefits from high quality installation and competently performed regular maintenance.

So what can we do with this data? Lots. The first thing is we can encourage governments to work on policies and programs that promote better maintenance activities.

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We can also arm business owners and facility managers with the information that spending more on regular maintenance will save money in the near term and longer term.

The benefits from this realisation are clear and obvious.

1. The first is that the refrigeration and air conditioning trade will be able to professionalise even further. The services you provide will be even more essential and the benefits they provide even clearer than they are today. The market will likely compensate further for these improved outcomes.
2. The second benefit brings us back around to where we started: improved energy efficiency, reductions in electricity demand and cost and even lower greenhouse gas emissions.

When Imogen buys the air conditioner that keeps her guests cool for her 40th birthday party it may not have 152 stars. But, if we can focus on what actually happens in homes and offices, it may deliver far more efficient cooling than what we have today.

That's something worth working towards. NB: This article is extracted from a presentation Picker delivered at ARBS2022.